

**Hazardous Substances Emergency Events Surveillance
Prevention Outreach Plan - FFY 2000
Missouri**

GOAL

The goal of this prevention outreach plan is to develop and implement strategies to reduce the number of hazardous substance emergency events in Missouri and the morbidity and mortality resulting from these events.

PREVENTION ACTIVITY #1

Description of Activity

Fact sheets will be developed on the five substances most frequently spilled or released in Missouri during 1994 - 1998. Fact sheets will include information on the toxicity of the chemical and precautionary measures that can be taken to prevent spills or releases. Information on symptoms from exposure will be included, as well as first-aid measures to take immediately after exposure to reduce the severity of injuries which may occur. Information contained in the fact sheets will be obtained from ATSDR, EPA, and other resources, and will be tailored to meet prevention needs of Missourians.

After the fact sheets are finalized, they will be sent to chemical manufacturers, users and transporters that conduct business in Missouri. Specific fact sheets will be sent to each business based on the chemicals manufactured, used or transported by the facility.

Type of Prevention Activity

- Primary – Increased awareness of chemical hazards will promote safer handling and transportation procedures.
- Secondary – Knowledge of symptoms following chemical exposure and first aid measures will decrease injuries.

Five-Year Data Analysis Justification

Table 1 depicts the top five substances released, the number of releases, and the percentage of all releases as identified in the five-year data analysis (1994 – 1998).

**Table 1
Most Frequently Released Individual Substances, Missouri 1994-1998**

Substance Name	Number of Releases	% of Total Substances Released
Ammonia	136	11.5
Sulfuric acid	48	4.1
Polychlorinated biphenyls (PCBs)	47	4.0
Ethylene glycol	42	3.6
Hydrochloric acid	39	3.3

Target Groups

- Hazardous substance manufacturers and their employees
- Hazardous substance transporters
- Businesses that use hazardous substances in facility operations

Collaboration with Local, State or Federal Agencies

The Department of Health has collaborated with the Department of Natural Resources to obtain the necessary information on hazardous substance manufacturers and transporters. This information includes, but is not limited to, name and address of the company; contact person; latitude and longitude for fixed facilities; and standard industrial classification (SIC) codes.

The department has also collaborated with the Department of Labor and Industrial Relations to obtain names and addresses of businesses which handle or manufacture chemicals based on the SIC code.

Finally, the department has collaborated with the Missouri Emergency Response Commission to obtain names and addresses of facilities required to file Tier II forms in Missouri, in addition to the substances handled by each facility.

All of the data from these three sources have been merged into one database and duplicate entries have been deleted. This mailing list will be utilized for distributing appropriate fact sheets.

Completion Date

May 31, 2000

Effectiveness Measures

- Prevention activities will be considered effective if a decrease of 10 percent or more is noted in the number of events and the number of injuries during calendar year 2001 in which one or more of the top five substances are involved.
- Effectiveness will be measured based on the number of fact sheets that are mailed after determining which businesses handle or transport any or all of the top five substances released.

PREVENTION ACTIVITY #2**Description of Activity**

Quarterly reports summarizing information such as the number of events per county, risk factors, and trends will be developed for the ten counties that have the highest five-year total for number of events. These reports will be distributed to the county emergency management director, Local Emergency Planning Commission (LEPC), county and local fire and police departments, area hospitals, local public health agencies, and other interested parties. Reports will also be sent to fixed facilities within these counties that had at least one reportable event within the previous calendar year. In addition to summary data, pertinent fact sheets and other informational materials on substances released during these events will be mailed with the report. A descriptive letter regarding the HSEES program and the purpose of these reports will be sent with the first mailing.

Type of Prevention Activity:

- Primary – Increased awareness of chemical hazards will promote safer handling and transportation procedures.
- Secondary – Information provided to emergency management workers, first responders, medical personnel, and health departments will enable them to minimize casualties and treat victims.

Five-Year Data Analysis Justification

Table 2 depicts the ten counties having the highest number of HSEES events as identified in the five-year data analysis.

Table 2
Counties with the Highest Five-Year Total Number of Events, Missouri 1994 - 1998

County	Number of Events	% of All Events
St. Louis	173	16.2
Jackson	112	10.5
St. Louis City	82	7.7
Greene	60	5.6
Jefferson	55	5.1
Jasper	54	5.0
St. Charles	42	3.9
Marion	38	3.5
Clay	29	2.7
Boone	23	2.1

Target Groups

- Emergency medical response personnel
- Professional and volunteer firefighters
- Police departments
- Emergency management organizations
- Emergency first responders
- Health care providers
- Local public health agencies
- Management and employees of facilities that experience HSEES events

Collaboration with Local, State or Federal Agencies

Emergency management directors, county and local fire and police departments, area hospitals and local public health agencies in the identified counties will be encouraged to contact the HSEES program with information relating to hazardous substance emergency events. This will increase the number and types of reporting sources for surveillance information.

Completion Date:

Each quarterly summary will be distributed within 45 days of the close of the reporting quarter, i.e., January-March due May 15; April-June due August 15; July-September due November 15; and October-December due February 15, 2001.

Effectiveness Measures

- Prevention activities will be considered effective if a decrease of 10 percent or more is noted in the number of events and the number of injuries during calendar year 2001 in which one or more of the top five chemicals are involved. Specific analysis will be conducted on events and injuries to employees and responders in these 10 counties.

PREVENTION ACTIVITY #3**Description of Activity:**

A web site will be constructed that will include all of the fact sheets developed during Activity #1. This web site will also include information on the HSEES program, the five-year data analysis report, annual reports, and other items of interest. Links to existing sites will be established to provide quick access to ATSDR, EPA, OSHA, NRC, and other agencies that maintain information concerning hazardous substances on the Internet. Links will also be established to other Internet resources that provide information on each of substances. Upon completion, the web site will be placed on the Department of Health's home page.

Type of Prevention Activity

- Primary – Accessibility of data will enable manufacturers and transporters of hazardous substances to perform their jobs in a safer manner.
- Secondary – Enhanced availability of data to first responders, medical care providers, health agencies, and the general public will help these individuals minimize the morbidity and mortality that result from hazardous substance releases.

Five-Year Data Analysis Justification

Descriptive and trend data useful for prevention programs will be extracted from the five-year report for inclusion in the web site. Examples of data to be included in the web site are: locations of chemical releases; types of substances involved; types of injuries sustained; categories of persons injured or killed; factors contributing to accidental releases; and prevention measures.

Target Groups

- Industry groups
- Labor groups
- Emergency medical response personnel
- Professional and volunteer firefighters
- Emergency first responders
- Emergency management organizations
- Health care providers
- Police departments
- Local public health agencies
- General public

Collaboration with Local, State or Federal Agencies

Local, state and federal agencies will be linked directly to the HSEES web site. In addition, appropriate local, state and federal agencies will be contacted to request that their web sites contain links to the Missouri HSEES web site to increase awareness of the program. Information regarding the web site will be included in DOH publications, and other agencies will be asked to include this information in printed materials relevant to hazardous substance emergency events.

Projected Completion Date

September 30, 2000

Effectiveness Measures

- Effectiveness of the web site will be measured by the number of hits during its first year of operation, in addition to an increased number of requests from the general public regarding the HSEES program.
- Prevention activities will be considered effective if a decrease of 10 percent or more is noted in the number of events and the number of injuries during calendar year 2001 in which one or more of the top five substances are involved.

PREVENTION ACTIVITY #4

Description of Activity:

Information on the HSEES program will be provided at conferences and training sessions sponsored by the State Emergency Management Agency (SEMA) that target emergency management directors, local police and fire department personnel, city/county officials, etc. SEMA conferences and training sessions attract a large number and variety of personnel from the target groups listed, and is one of the most effective methods available to establish relationships and share information with these groups. These statewide conferences allow us to reach the maximum number of people in the target groups in the most effective manner.

Fact sheets developed during Activity #1 will be modified with additional information specifically targeted to responders. These fact sheets will be distributed during the conferences and training sessions. Additional information will include:

- Identification numbers (CAS, UN, DOT, etc.)
- Flammability and reactivity hazard ratings
- Clean up and/or disposal measures
- Permissible concentrations in water and/or air
- Exposure limits
- Specific respirator and PPE requirements

Data similar to that contained in fact sheets (Activity #1), quarterly reports (Activity #2) and the web site (Activity #3) will be used to develop presentation materials. The data will be presented in formats (e.g., tables, graphs, geographic information systems products) designed to maximize the learning experience for these audiences.

Presentations will include slides or overheads giving a general overview of the HSEES program, and will highlight data from the five-year data analysis. In addition, the presentation will cover seasonal and geographical trends revealed through the data analysis, as well as providing anecdotal information on significant events that have occurred in Missouri.

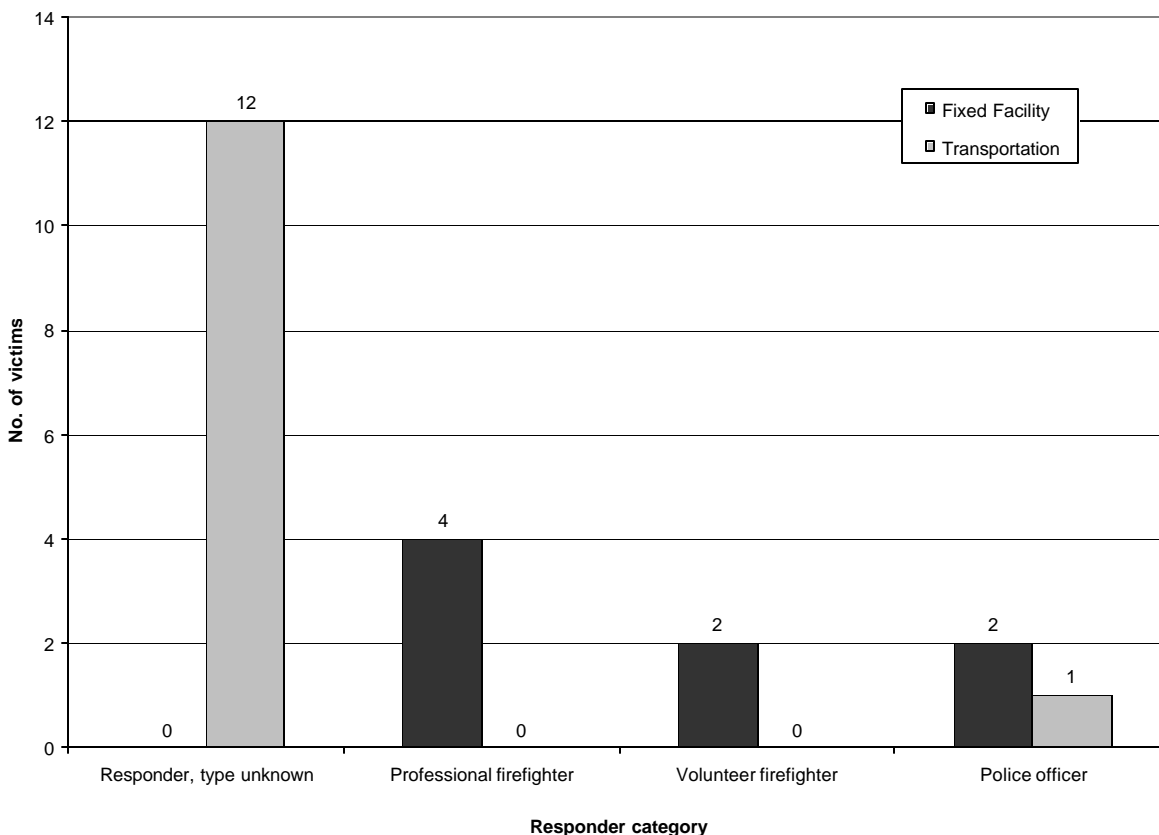
Type of Prevention Activity

- Primary and Secondary – Personnel who attend these conferences and training sessions come from the entire state. After attending, they will return to their jurisdictions throughout Missouri, taking with them and dispersing information that will decrease the numbers of spills and victims.

Five-Year Data Analysis Justification

Twenty-one responders were injured during HSEES events during the five-year data analysis period. Figure 1 illustrates the number of responder victims by population group and type of event.

Figure 1. Responder victims by population group and type of event, Missouri 1994-1998.



Target Groups

- Emergency response personnel
- Police department personnel
- Professional and volunteer firefighters
- Emergency management organizations
- City/county/state officials
- Local public health agencies

Collaboration with Local, State or Federal Agencies

The Department of Health will collaborate with SEMA to make arrangements for participating in conferences and presenting information during formal training sessions.

Projected Completion Date

September 30, 2000

Effectiveness Measures

- Prevention activities will be considered effective if a decrease of 10 percent or more is noted in the number of events and the number of injuries during calendar year 2001.
- Effectiveness will be measured based on the number of fact sheets distributed during these training sessions and conferences. In addition, evaluation forms will be completed by attendees at these events to obtain feedback on the information presented.

The five-year data analysis indicates that an average of 214 HSEES events was reported annually from 1994 -1998. However, we anticipate a significant increase in the number of events per year due to the recent decision to include all hazardous substance spills or releases of 1 gallon/10 pounds as reportable events. In addition, increased visibility of the program will likely increase the number of events that are reported.

We project that a baseline will be established by the end of calendar year 2000. The impact of prevention outreach activities, which will be completed by September 30, 2000, will be measured during calendar year 2001 against this baseline.